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Original Communications.

A CASE OF MALIGNANT ŒDEMA.

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A PAPER, published a few months ago by Dr. Mauvezin,\* offers some new facts and considerations bearing upon the subject of *charbon* (carbuncular or anthracoid disease).† The author seeks to establish the existence in man of a particular form of this virulent affection, which is not very uncommon among herbivorous animals, and which is known to veterinary surgeons by the name of "carbuncular fever, with tumors" (*fièvre charbonneuse avec tumeurs*); to this form of charbon, when seen in man, he gives the name of "malignant carbuncle" (*charbon malin*). It differs from the form made known by Bourgeois, under the name of "malignant œdema," only in the order of development of the local and general symptoms; the anteriority of the former being characteristic of malignant œdema, whereas, in "malignant carbuncle," the general symptoms precede or accompany the apparition of the superficial lesions. The amount of clinical evidence to be adduced in any attempt to describe and classify the rarer forms of charbon appears very meagre and unsatisfactory.

Dr. Mauvezin's paper is based on three cases only, briefly reported, and unaccompanied by any record of *post-mortem* examination. One of his cases, indeed, is borrowed from Dr. Raimbert,‡ who considers it a case of malignant œdema. This latter disease is itself of rare occurrence; it is most often met with on the eyelids, as described, first, by Bourgeois,§ and by him limited to that locality; but Dr. Raimbert asserts that the disease may occupy other parts of the body, the trunk and limbs. Reported cases are, however, as Dr. Raimbert himself confesses, "rare and very incomplete." In view of this dearth of observations, I venture to offer for publication a case of which the notes

\* Archives Générales de Médecine, August, 1873; translated in the American Journal of Syphilography, January, 1873.

† It is to be regretted that we possess in English no satisfactory equivalent for the French terms "charbon" and "charbonneux." The English "carbuncle" and "anthrax," and their adjectives "carbuncular" and "anthracoid," are objectionable, as their significance is equivocal, and leads to confusion between furuncular affections (furunculus and carbuncle) and malignant pustule; not only the terms, but the widely different diseases themselves, have been thus confounded, especially when furuncular disease of the face (often called "facial carbuncle") has taken on a so-called "malignant" course, through extension of facial phlebitis to intra-cranial veins and sinuses. (For examples of this confusion, see Boston Medical and Surgical Journal, vol. xlvii. p. 75.) The French terms offer no such ambiguity; *charbon* is the toxæmic disease met with in animals and in man, and transmissible by inoculation; *anthrax* is what we call carbuncle, a spontaneous, local affection, sometimes proving fatal through debilitation, as in diabetes, or through pyæmia, but possessing no specific virulence or "malignancy."

‡ Traité des Maladies Charbonneuses. Paris. 1859.

§ Traité de la Pustule Maligne et de l'Œdème Malin. Paris. 1861.

were taken by myself, when interne in the service of Dr. Voillemier, at the Hôtel Dieu, of Paris; the observation is, no doubt, incomplete in some important particulars (microscopic examination of the blood before death, inoculation upon sheep, &c.), but I think that it, nevertheless, contains some data which may make it a useful addition to the small stock of reported cases, for those who, at some future day, may undertake to establish the nosography of charbon, of which, with the exception of malignant pustule, so little is known positively. Without further apology for the deficiencies of my report, I subjoin a literal translation of the original notes.

CASE.—A. C., aged 24, a butcher, living in Paris, Boulevard Montparnasse, entered the Hôtel Dieu (bed 21, Salle St. Côme) on the evening of July 25, 1869, on account of a slightly painful swelling of the right axilla, accompanying a small and superficial wound, situated on the forearm. With regard to this wound, the patient, who is quite intelligent, relates that it first attracted his notice ten or twelve days ago, but he thinks that it must then have already existed several days; he does not know how, when or where it was inflicted, but he "thinks it must be a sting," received while walking in the country near Paris (?). For two months and a half, he had ceased his occupation as a butcher. He offers no morbid antecedents, but says he is robust and healthy.

The wound, when first observed, appeared quite insignificant; but, about five days ago, the patient noticed, on the thoracic wall of the axilla, what he calls "a small gland," which was hard, and a little painful. This lump increased in size; then, the neighboring parts becoming swelled, it could no longer be felt. He denies having been feverish, but on the morning of the 23d of July (three days ago), having got wet through by the rain, he got into bed with his clothes on, and had a shivering fit, which lasted several hours.

The next day, the 24th, he got up, and applied for admission at the Hôtel Dieu, but was not received, as he came after the out-patients' hour, and his case showed no urgent symptoms. He did not feel very ill on that day, ate as usual, and went to bed at ten o'clock, feeling somewhat fatigued.

On the 25th, he applied at the Bureau Central for a bed, and was sent to the Hôtel Dieu. In the evening, he was seen by one of my fellow house-surgeons, who reports having observed a trifling-looking wound on the middle of the front aspect of the right forearm; this wound then presented a smooth, rosy, granulating surface, slightly raised, and about as large as a peach stone in extent. The thoracic wall on the same side presented an extensive, œdematous tumefaction; no lump was perceptible, nor could fluctuation be perceived; the region was hot, red, and somewhat painful, all the local appearances being those of acute adenitis; the pulse was a little frequent, but strong; the extremities were somewhat cold. During the afternoon, the patient complained of great thirst; he had no appetite, and vomited his beverage several times; he had one normal motion of the bowels in the night. No cough, or dyspnoea.

On the ensuing morning (the 26th), at eight o'clock, I see the patient for the first time, when making the round of visits with Dr. Voillemier, in whose ward the patient was placed. The sister says that he has been very restless all night, throwing off his bed-clothes,

and complaining of heat and thirst; he was not at all delirious, and his mental faculties appeared unimpaired; he does not complain of being in any pain, but he is drowsy, and wants to be let alone. We are struck by the condition of extreme algidity which he presents, his general appearance being that of a cholera patient in the most marked algid stage; his tongue is moist, but cold and purple; except the right axillary region, which is relatively warm, the surface of the body is very cold and moist; the skin is livid, mottled and marbled with purple streaks and spots; the extremities, as well as the nose and ears, are purplish and very cold. The wound on the forearm is of a bluish tint, instead of being reddish, as yesterday; pressure on the skin leaves a white spot, which disappears very slowly. The abdomen is somewhat swollen and tense; the right upper arm is tumefied on its inner aspect; on the right side of the body, the tumefaction extends from the axilla and chest as far as the crest of the ilium. The skin covering the tumefied region is apparently in a normal condition, presenting no sign of vesicles or gangrenous patches. The pulse is now imperceptible. The urine is scanty and high colored. The patient is in a torpid state, but is easily roused, and gives quite willingly, and in a very clear way, all the information reproduced above. He suffers little or no pain, but feels fatigued, and wants to sleep; he complains, also, of thirst, and of a feeling of heat, which leads him continually to throw off his bed-clothes.

By order of Dr. Voillemier, a hot vapor-bath is immediately administered, under blankets, and hot drinks with rum are directed. The warmth of the bath is at first complained of, but after half an hour, the patient says he feels better; he, nevertheless, is sinking very rapidly; his respiration becomes accelerated, with a groan at each expiration, but without any râles being heard on auscultation; the pulse and beating of the heart are imperceptible; the pupils are enormously dilated. At 11 o'clock, he ceases to answer when spoken to; at 11.30, he expires. Immediately after death, the temperature, taken in the rectum, is 98.2°; twenty minutes later, it is 98°, and continues to fall.

*Post-mortem* examination made on the 28th, 46 hours after death. The body is much swollen, especially the thorax, the upper extremities and the face, the latter being quite disfigured. From the nose and mouth, black blood, with bubbles, is ceaselessly pouring. The skin of the upper half of the body has become quite black, and is covered with vesicles and bullæ, which have appeared since death. The soft parts, when incised, pour forth the same fluid, black blood with bubbles. The peritoneal cavity contains much gas. The lungs are healthy, with the exception of a certain degree of posterior hypostatic congestion, and a black or purplish color, which is presented by all the viscera. The heart is soft and flabby; the endocardium is stained black; no clots are discoverable. The blood is everywhere fluid and syrupy, of a dark purple color, almost black. The liver is congested and soft; the spleen is voluminous and soft, resembling a bag full of black putrilage. The kidneys appear unaltered to the naked eye. No trace of phlebitis in the wounded arm. In the axilla, in the depths of the œdematous cellular tissue, there is a mass as big as the fist, composed of enlarged, lymphatic glands, many of which are as large as a walnut; the glands are not indurated; they are purplish, on section,

and of a fleshy consistency. No trace of pus anywhere. The body, when opened, exhales a peculiar, indescribable smell, quite different from that which ordinarily results from *post-mortem* decomposition.

REMARKS.—If called upon to name the particular form of charbon, of which the foregoing case seems to me to be an example, I should call it a case of *malignant œdema*, so closely do all its features agree with the description of that affection given by Raimbert;\* indeed, the resemblance of this case with that which is quoted from Raimbert by Mauvezin as an instance of what the latter proposes to call "*malignant carbuncle*" is quite striking, the only difference being that, in my case, the local symptoms appear to have slightly preceded the outbreak of general toxic phenomena. But I will not presume to attempt any discussion of the nosography of carbuncular disease, especially where such nice distinctions are to be drawn as those which separate "*malignant œdema*" and "*malignant carbuncle*." My only object now is to add to the existing evidence a case which seems to corroborate the exactness of Raimbert's description of malignant œdema, which description was based, by the author's own avowal, on a very small number of imperfectly reported cases. Raimbert describes the disease as follows: "When met with on the body, carbuncular œdema generally occupies the upper and lateral parts of the thorax. It produces but slight local uneasiness or discomfort, and assumes the appearance of a soft, doughy, tremulous swelling, without any discoloration of the skin. The tumefaction is diffuse, and rapidly attains to very considerable proportions, especially when situated on the mammary region. By the second or third day after the appearance of the œdema, the general symptoms come on; they are the same as those already described (i. e., in connection with malignant pustule), only the patient generally succumbs much more rapidly than in cases of malignant pustule; the consequence is that the local symptoms do not have time to reach their full development. Sometimes, however, before death supervenes, the tumefied region, assuming a sombre, red hue, becomes the seat of more or less numerous phlyctænæ, or else it becomes of a livid color, showing the existence or the imminence of mortification of its tissues. Carbuncular disease, when situated on the limbs, has the same characteristic features, only the further it is removed from the thorax and abdomen, the slower is the development of the toxic symptoms, so that the appearance of the phlyctænæ is likely to be more common, diagnosis more easy, and treatment more effective.†"

The general symptoms, according to Raimbert, are those of the toxic period of malignant pustule, namely: at the outset, with or without rigor, some feverish symptoms, with vomiting and constipation, soon followed by a feeling of prostration; the patient becomes somnolent, and is at the same time troubled with inability to sleep; the abdomen is tympanitic; the pulse becomes feeble; the surface of the body, covered with a cold sweat, grows quite cold, and cyanotic in hue, as in the algid stage of cholera. Sometimes, the patient is tormented by a feeling of burning internal heat, with thirst; he is restless, throws off his bed-clothes, and calls for drink; the urine is scanty,

\* Nouveau Dictionnaire de Médecine et de Chirurgie pratiques. Paris. 1867. Vol. vii. p. 180.

† Loc. cit p. 181.

or suppressed; the pulse grows weak and ceases to be felt. With all these phenomena of general prostration, the mental faculties are almost always unimpaired. Death ensues very rapidly.\*

The *post-mortem* appearances are, mainly, the following: very speedy putrefaction, with development of gas in the peritoneum, intestines and bloodvessels. The blood is thick, fluid and black, and rapidly putrefies; in some cases, when examined during life, bacteria have been found in it; their morbid significance is, however, still equivocal. The spleen, always enlarged and much softened, is of a purplish or black color. The liver, kidneys, and, in fact, all the viscera are considerably congested, and of a dark color.†

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### Clinical Lecture.

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#### ON THE EXCISION OF JOINTS.

Delivered at the Boston City Hospital.

By DAVID W. CHEEVER, M.D.

GENTLEMEN,—The wards contain, just now, a very interesting series of cases of joint disease, and the child on whom I am about to operate this morning, you have seen for the past month undergoing the treatment by rest and extension, for hip disease. At first apparently benefited, he has latterly grown thin, irritable, vigilant and febrile. A week ago, fluctuation was detected near the trochanter, and pus was evacuated. The case, then, may be said to be ripe for excision. During this winter, one case of double hip disease in a little girl has terminated in death. Another, an adult, after ten years of incessant suppuration, and being riddled with sinuses all about the pelvis, into the rectum, above Poupart's ligament in the groin, and even on the opposite flank, and up over the false ribs, has finally succumbed beneath his sufferings. A third, an adult, after a spontaneous cure of hip disease in childhood, with dislocation and ankylosis, enjoyed a period of quiescence from disease for twenty-four years, when a fall lighted up again the dormant tendencies, new abscesses formed, and, after being bedridden for eighteen months, she has just undergone excision of the diseased bones, as a relief from suffering.

By the excision of joints, we mean the cutting out of diseased or broken joint-surfaces, trusting to the bone-reproducing power of nature to form a false joint, or, in the knee, a bony ankylosis. Although a modern operation, nature has long since shown us the lesson, in the false joints she forms in an ununited fracture or in an unreduced dislocation.

To Park, Moreau, White, Stromeyer, Esmarch, Larrey, and other surgeons, we owe the practical boldness to make the attempt of excision; but to Ollier, of Lyons, Sédillot, of Strasburg, and Langenbeck, of Berlin, the patient experiments and clinical researches which have taught us why and how to expect success—especially to M. Ollier, whose life-long researches on the regeneration of bone and the functions of the periosteum, in experiments on the lower animals, have demonstrated the laws which govern our results.

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\* Loc. cit. p. 157.

† Loc. cit. pp. 175 to 179.

It is true that we cannot reason strictly and directly from the lower animals to man. The lamb or the chicken repairs a fracture with the leg dangling. Their recuperative power is vastly greater than ours; yet, if not strictly comparable, their modes of bone-growth are analogous to that of man, and may point the way to human experiment and success.

In the growth and repair of bones, the periosteum, the Haversian canals and the medullary connective tissue (endosteum) all furnish the plastic elements to form osseous structure. So, too, there are three vascular systems directly concerned: that of the periosteum, that of the medullary membrane, and the nutrient artery. In diseased joints, we find the vessels enlarged and increased, and the periosteum thickened and very vascular, which is, probably, one reason why excisions for disease are better recovered from than those for injuries, where the circulation is only adapted to the wants of a healthy part, instead of the increased demands of an inflamed one.

The periosteum is far, then, from being the only source of bone-repair, though it is the most important one. If we can save the periosteum, we hope for a more perfect reproduction of bone than if it be destroyed. Hence, the importance of the most modern operations of Ollier and Sédillot, called "sub-periosteal resections." In these, we aim to scrape the bones, rather than to cut around them; to push back and preserve every portion of the periosteum, and to excise the diseased or broken joint, with the bones cleanly denuded of all soft tissue. These sub-periosteal operations give admirable results.

Ollier's experiments have demonstrated, to use his own words, that:

"If bone is removed and its periosteum left, bone will grow again.

"If the processes and articular ends of bones are removed, and the periosteum is preserved, the processes will be reproduced.

"If bone is transplanted with its periosteum, the bone will live and grow (osteo-plastic operation).

"But if cartilage is transplanted, it will degenerate, or die."

The last statement explains why, in a traumatic excision, we usually get a better result by cutting out all the articular surfaces, than by leaving any portion of them; for the feeble vitality of cartilage, nourished by imbibition, usually fails to survive the irritation of an opening in the joint, and it degenerates, suppurates and peels from the bones.

There is one very important restriction to the growth of excised bones. Since the growth of the long bones takes place between the epiphysis, or articular end, and the diaphysis or shaft, it follows that if a section of a growing bone is made above the junction of the epiphysis and diaphysis, growth in length will cease. Thus it occurs that we sometimes see an excision of the knee in childhood followed by arrest of growth in the femur, and the child, when grown up, having the excised limb from three to seven inches shorter than its fellow, and practically useless. But we must remember that the joint is diseased so high up, in some cases, that we must saw above the epiphyseal junction. Moreover, in certain joints, as the knee, if we follow the established rule to remove all the articular surfaces in excising, we inevitably go above the epiphysis, since the line of junction runs through the upper third of the articular surface of the condyles of the femur. If we go below this line and leave articular cartilage, we run the risk of its degeneration and death.

Since, then, disease or anatomical peculiarity may make it impossible for us to avoid the epiphyseal line in a given excision, it is important to inquire whether future growth will be equally interfered with, in every joint alike? Ollier has made this a matter of careful study and long experiment on the lower animals, aided by a comparison of the results of actual excisions in the human being. He has arrived at the following law:—"In the bones of the *upper* extremity, it is the ends going to form the *elbow* which grow the *least*. In the bones of the *lower* extremity, it is the ends going to form the *knee*, which grow the *most*." Therefore, excisions of the knee, shoulder or wrist are followed by more arrest of growth than those of the elbow, hip or ankle. In other words, if we excise the head of the humerus *below* the epiphysis, we shall lose *more* in future growth of the limb than if we excised the lower (condyloid) end of the humerus *above* the epiphysis, at the elbow. The wrist is as bad as the shoulder. And, in the lower extremity, if we excise the head of the femur *below* the epiphysis, we shall lose *less*, in future growth of the limb, than if we excised the lower (condyloid) end of the femur, *above* the epiphysis at the knee. The ankle is as good as the hip. It follows that the elbow gives the best results in the upper extremity; the hip (or ankle) in the lower extremity.

But other considerations now come in, for shortening in the upper extremity is of little consequence, compared with the lower; and, moreover, it is only in childhood, the growing period, that shortening can occur. The whole question of arrest of growth in the excision of joints narrows itself down, then, to the expediency of excising the *knee* in youth.

Excisions for disease give a larger percentage of recoveries than excisions for injury. The same is true of amputations. The diseased joint has already been through the inflammatory processes, and the system has become habituated to them. Yet, there are certain conditions in disease that are not so favorable. Brodie first pointed out, and later observers have confirmed the observation, that, in a patient for a long while confined to bed, the bones undergo a sort of fatty degeneration, just as the muscles do. There is a loss of phosphates, and a softening of cancellous structure, under long disuse, which resembles the incipient stage of caries.

Convalescence after excision is, at best, very slow. Three to six months for an elbow, or shoulder; eight months for a hip, and twelve to eighteen for a knee.

The ratio of mortality varies in the different joints. In the hip—uniting Dr. Hodges's and Dr. Foote's tables—we have nearly fifty per cent. of deaths, or one in two. But if we look at the influence of age, we find the mortality under ten years, 33 per cent.; from ten to twenty years, 57 per cent.; twenty to thirty years, 60 per cent.; over thirty years, 83 per cent. Thus, in childhood, when the disease is most frequently met with, after excision of the hip, two out of three recover; but in adult life, two out of three die.

Mr. Swain has collected 472 cases of excision of the knee. The mortality of all the cases averaged 27 per cent. If we include those subsequently amputated, we find the ratio of recovery, with preservation of the limb, to be about two in three. Other statistics, however, show that in chronic disease of the knee, excision is twice as fatal as

amputation. Mr. Bryant, indeed, claims to prove that, in childhood, excision of the knee is seven times as fatal as amputation; and in adult life, twenty per cent. more fatal. Accumulated statistics prove the chance of success in excision of the shoulder to be three out of four; and in excision of the elbow, two out of three.

We must bear in mind that, after all excisions, secondary amputation can usually be safely resorted to, if required; while at the hip, excision is the only operation justifiable, the mortality after amputation at the hip-joint being over 90 per cent. Says Mr. Bryant, of Guy's Hospital:—"For disease of the hip and shoulder, amputation is a very rare operation; for the knee and ankle, it is yearly becoming less common. Amputation of the arm, for diseased elbow, is still less justifiable." Obviously, in joint disease, no operative interference is to be thought of, unless the articulation has suppurated and become disorganized. Amputation is out of the question, until other measures have been exhausted in vain. Amputation and excision are equally fatal, if undertaken in *acute* suppurative disease. Let out the pus, and wait for the system to become quieted, and the inflammation chronic, before you operate.

But an operation for excising the head of the femur in chronic hip-disease is scarcely more severe than an operation elsewhere for necrosed bone. It is followed by no shock, and the child usually appears better the day after the operation than the day before. When we have evidence that the pelvis is extensively diseased, we may hesitate; yet, even here, nature is capable of almost boundless repair, if the diseased parts are freely exposed. Thus, Fergusson removed the head of the femur, the acetabulum, and portions of the ilium, ramus of the pubes and ischium, with good recovery.

In excising the hip, a V-incision gives the best drainage, which is the most important point. If the greater trochanter and some muscular attachments can be saved, they promote the future usefulness of the limb. Extension by weight and pulley is to be kept up for many weeks. The results after excision, as to shortening of the limb, are about the same as after the spontaneous cure by dislocation—two, two and a half, and even three inches. But the motions of the limb and the power of everting the foot are better in the false joint of an excision than in the ankylosed dislocation of the spontaneous cure. Lordosis is also less after excision. And yet we see some excellent results from the spontaneous cure. We would not excise every case of chronic hip-disease. But in hospitals we should do it oftener than in private practice, since the hospital patient has less chance of living through the natural cure, owing to the bad state of his surroundings at home.

Excision of the knee may be classed as the least promising of all, for these reasons:—

1. The chance of arrest of growth of the femur, in length.
2. The chance of the decay of articular cartilage, necessarily left behind, if we saw below the epiphyseal junction.
3. The greater difficulty of procuring bony ankylosis, as compared with a false joint.
4. The difficulty of securing immobility and cleanliness, together, during treatment.
5. The length of confinement to bed, and the greater mortality than from amputation.

Langenbeck has devised an operation for excising the knee, and preserving a movable joint. The incision is made parallel to the ligamentum patellæ, and the patella and quadriceps tendon are preserved. We are not informed of the results of this operation, but should suppose success to be exceptional.

Excision of the shoulder gives excellent results, although we have more or less shortening of the upper arm, often to the extent of three or four inches. Wasting and loss of power of the deltoid muscle often result, also, from this excision. Yet, if a false joint can be established as a centre of motion and rotation, the elbow, forearm and hand are extremely useful.

Excision of the elbow gives the most admirable results of all: with the least arrest of growth; the greatest reproduction of bony processes; the most complete restoration of function, and the most serviceable member. The operation is done by a single straight incision, parallel to the long axis of the limb, and running over the ulnar side of the olecranon process. The tendon and fascia of the triceps are carefully preserved in their attachment to the ulna, and the ulnar nerve should be pushed off the groove of the inner condyle with its sheath unopened. By following strictly the sub-periosteal method, scraping and pushing back the periosteal sheath of the bones, we secure the reproduction of bony prominences, resembling the condyles and the olecranon. The arm is exceedingly useful. In one case in which I operated, a young man can carry a pail of water; dress himself; use his knife and fork; do up bundles; flex, extend, pronate and supinate, and even hold out a heavy octavo book at arm's length. There is a great spreading of the lower, sawed end of the humerus; and strong buttresses of new bone for the attachment of the flexors and extensors of the forearm.

Although the chance of success is not so good in traumatic cases as in those caused by disease, yet we sometimes may save those apparently desperate, while we can amputate secondarily, if the excision fails. Two cases have occurred to me, in the last three years, of very severe injuries. Both patients sustained compound fractures into the elbow-joint, with laceration of skin and muscles on the back of the joint. The tissues in front of the elbow were uninjured. Sensation and circulation in the hand were unimpaired. Formal excision of all the articular surfaces was done, and resulted, after six months, in the preservation of the forearm and hand, with a false joint.

Formal excisions of the wrist and ankle are not so frequently called for as in the other joints. Partial gouging (*évidement* of Sedillot) is applicable to these joints and to the tarsus. By Mr. Hancock, very extensive removals of the astragalus, os calcis, or smaller tarsal bones, have been done, with the result of a passable and useful foot.

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NOTCHING THE OS TO AID DILATATION.—In a case of *placenta prævia*, reported by Dr. M'Dougall, at a meeting of the Obstetrical Society of Edinburgh, it was found impossible to dilate the os, owing to the existence of a firm, narrow band, which passed around the whole inside circumference. All efforts to overcome the stricture by digital manipulation proving fruitless, it was decided to notch the os at four different points, by means of a probe-pointed bistoury. Immediately afterward, the operator was enabled to introduce three fingers and drag down the placenta. Previously, he had only been able to introduce the index finger, although the woman was completely anæsthetized.—*Edinburgh Medical Journal*, Feb., 1874.

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## Progress in Medicine.

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### REPORT ON ANATOMY.

By THOMAS DWIGHT, JR., M.D.

[Concluded from p. 239.]

#### NERVOUS SYSTEM.

*Nerve Cells in the Sympathetic.*—Probably the chief cause of the obscurity of the physiology of the nervous system, apart from the inherent difficulty of the subject, is the looseness with which physiological deductions have been drawn from anatomical appearances. The nervous system consists of cells, fibres and granules, and because the cells occur in greater number in its more important parts, it has been assumed that the importance depended on the cells. It seems so natural to hold that the object of the fibres is to conduct, that it is only of late that any other has been ascribed to them. It has become evident that, in certain parts, the spinal cord for instance, there must be other conductors than the fibres, and it has been assumed that this place is taken by nerve cells communicating by their branches with the fibres on one hand, and with other cells on the other; but such communications have been demonstrated only occasionally, no such chain has ever been shown, and, even in the best preparations, the majority of the cell processes do not join others. The granular matter has received little attention; yet, as Henle intimates, there is no reason to consider it unimportant. Nerve cells were originally held to be apolar, unipolar and multipolar; but, as the first were in opposition to the accepted theory, and the second but little better, it was thought more philosophical to deny their existence; to say that their processes had been broken off, than to admit that there were isolated cells. Of late, however, many excellent observers agree that apolar cells do exist, though most of them seem to feel that some apology is due for so inconvenient a discovery, which, like most other modern ones in this branch, tends to unsettle rather than to confirm what has been accepted.

Sigmund Mayer, the author of the paper on the Sympathetic, in Stricker's Histology, has published a very interesting paper entitled "Observations and Reflections on the Structure of the Sympathetic Nervous System," in the *Proceedings of the Vienna Academy* (vol. 66, parts 1 and 2). This paper, which is meant to be suggestive rather than demonstrative, is the more worthy of attention that it treats minutely of appearances usually slighted, and that the author is not hampered by existing theories. Any one who has searched the sympathetic of a frog for the pear-shaped cells with spiral fibres, described by Beale, Arnold and others, is struck by the numbers of cells which differ from the described types. They are of various sizes, usually granular, often containing several nuclei. Mayer dwells on the fact that the larger have more irregular outlines than the smaller, and far more frequently present branches. He also calls particular attention to accumulations of cells—cell nests—of which each cell is nearly homogeneous, is of a faint yellow color, and has a nucleus very like that

of a blood corpuscle.\* These, he is inclined to think, are younger nerve cells. He well observes that unless we look upon the nervous elements as stable structures, existing throughout the life of the animal, we must expect to find them in different stages of development. Now, remembering the intimate relations of the sympathetic with the bloodvessels, the admitted fact that red blood corpuscles can pass through the walls of the capillaries, and the rapidity with which the appearance of the escaped corpuscle is modified, we cannot deny a certain plausibility to the author's hypothesis that the ganglion cells are formed from the blood. The escaped cell, at first clear, becomes granular, enlarges and sends out processes. But the most startling part of Mayer's theory is, that the perfectly formed nerve cell has not yet fulfilled the purpose of its existence, but is still merely a transitional form which is ultimately to become a fibre. As evidence to this effect, he adduces the occurrence of single cells in the course of nerve bundles, the occasional appearance of granular matter extending from one end of such a cell among the fibres, and the not uncommon appearance of two elongated cells connected by a narrow isthmus. The author will discuss the elements of the cerebro-spinal system in a future paper. It is interesting, in this connection, to recall Ranvier's observations showing that medullated nerve fibre is developed from cells. (Vide first report on Anatomy, JOURNAL of Sept. 12, 1873, page 185.)

Rudolf Arndt gives his views on the structure of the cells of the sympathetic in *Schultze's Archiv*, vol. 10, part 2. It is curious that, though Arndt's position is different from that of Mayer, several of their illustrations could be interchanged without the slightest injury to either paper. Arndt's opinion is that the cells are compound bodies, and that apolar ganglion cells are instances of arrested development. He does not give his reason for this latter opinion, which we therefore suppose he entertains solely because apolar ganglion cells do not accord with the accepted physiological theory. He divides the granular matter found in the cell-substance into two chief kinds, each of which may be still further subdivided. The two main classes are those with delicate prolongations and those without. He describes very thin sacks containing numerous small apolar cells, which evidently are identical with Mayer's cell nests. Arndt's conclusions are:—

"1. All ganglionic bodies of the sympathetic, which are supplied with several processes, that is all bipolar and multipolar ones, correspond to aggregations of cells and are derived from several such aggregations.

"2. All unipolar ganglionic bodies, on the contrary, correspond to simple cells, and are developed from such.

"3. All so-called apolar ganglionic bodies, if large, represent abnormal forms of development of the original formative cells; if small, they still are such cells."

*Auerbach's Plexus*.—Among the papers published by the Physiological Institute of Leipzig is one by Gerlach, in which he gives the results of some recent studies of this plexus, which is situated between the longitudinal and circular muscular fibres of the stomach and intestine. It consists of ganglion cells and of nerve fibres, the latter forming a coarse and a fine network. The cells are chiefly multipolar, and

\* These observations were made chiefly on amphibians.

the author is disposed to doubt the existence of apolar ones, as he claims to have seen on the cells which appear to be such, the points where the processes had been broken off. The branches of neighboring cells anastomose freely, but though the nerve fibres run through the ganglionic masses, no connection between them and the cells has been observed. The plexus begins in the fundus of the stomach and increases in number of cells towards the pylorus. There and in the duodenum it is best developed. It becomes weaker as it descends the intestine. The finer network springs from the coarser, and is the one to supply the muscular fibres, but the precise manner in which the nerves join the latter is uncertain. It is known only that the finest nerves join small, spindle-shaped bodies, each of which sends out one or two delicate filaments to be lost between the muscular fibres.

Klein writes on the same plexus in the October (1873) number of the *Quarterly Journal of Microscopical Science*. The point of his paper is to show that, besides the well-known cells lying more or less in groups between the individual nerve fibres, there are other larger ones lying in the meshes of the network of the fibres, which they join by one or more processes.

*The Structure of the Tactile Corpuscles* is discussed by Dr. Thin in the *Journal of Anatomy and Physiology* (November, 1873). The author gave his attention chiefly to the manner of termination of the nerve, the structure of the corpuscle in general, and of the so-called transverse elements in particular. He finds that the corpuscle is surrounded by an elastic network, and is composed of a mixture of cells and elastic fibres. The transverse elements, which are found throughout the corpuscle, are the nuclei of oblong cells which end in elastic fibres. Dr. Thin finds that there is no authority for dividing the papillæ of the skin into vascular and nervous, for a nerve enters every one, whether a touch-corpuscle be there or not. The nerve passes into the interior of the corpuscle, runs toward the apex, and then, describing a curve, ends abruptly. It retains its medulla and, probably, the sheath of Schwann.

#### VISCERA.

*Kidney.*—R. Haidenhain (*Schultze's Archiv*, vol. 10, part 1) has made some discoveries in the epithelial lining of the uriniferous tubules, which promise to be of considerable importance. He alludes incidentally to the disputed question of the epithelial covering of the Malpighian corpuscles, and states that he has found not only the covering, but, further, epithelial cells among the vascular convolutions. Before discussing his discoveries in the tubules, it may not be amiss to describe, briefly, the changes in size and shape which they undergo in their course. After leaving the Malpighian bodies, they are comparatively large and convoluted; then, becoming much smaller, they run down toward the pelvis of the kidney and return again to the periphery, thus forming "Henle's loops," of which the second, or ascending half, is the larger in diameter. Next comes a short, dilated, "intercalated" portion, which resembles a piece of the convoluted portion, and empties into the straight tubes which constitute the beginning of the end. The epithelium of the convoluted tubules is very peculiar, inasmuch as it does not consist of separate cells, but of a continuous pulpy mass, in which nuclei are imbedded at pretty regular intervals, together with fat globules and granules. The important part of Hai-

denhain's discovery is that the epithelial layer of these convoluted tubules is full of little rods pointing to the centre of the cavity and separated from one another by a homogeneous ground substance. Under the influence of certain reagents, nuclei appear among the rods. The author accounts for these appearances as follows:—"The protoplasm of the cells which originally lined the convoluted tubules is for the most part devoted to the formation of the rods, between which a small amount of connecting tissue (kittsubstanz) remains as a residue of the original formative material. The nucleus is, in all cases, surrounded by a greater residue of undifferentiated protoplasm, which, in some cases, is definitely limited externally, and in others passes without sharp limits into the substance surrounding the rods." The rods cease with the convoluted tubules, and the first half of "Henle's loop" presents the usually described lining of epithelial cells, with prominent nuclei, but the rods reappear in the larger or ascending half of the loop, and continue through the "intercalated" portion to the beginning of the straight tubules. The rods were found to a greater or less extent in the kidneys of animals of various classes, but with such apparent irregularity that no clue to their function could be gained by comparative anatomy. Haidenhain appears to have proved, by certain physiological experiments, that the process of excretion in the kidney is not confined to the Malpighian bodies, but, with praiseworthy caution, he offers no theory as to the function of the rods.

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POISONOUS HOMŒOPATHIC PREPARATIONS.—In commenting on the three cases, recently reported by Dr. George Johnson, of poisoning by camphor administered homœopathically, that is, in very concentrated form, the *Lancet* of December 13th ult., remarks:—"It is not denied that homœopaths are now at great variance as to the proper doses of medicine, and that the treatment of some homœopaths is not to be distinguished from that of ordinary practitioners, unless it be by the largeness of doses. We consider this a very serious matter. The morality of the change with so little open confession is a point that must be left for casuists. But the great charm of homœopathy is gone—its intense harmlessness. Dr. Stewart gave a melancholy instance of a gentleman dying from the effects of a double homœopathic dose of strychnia, which he had taken to make up for having omitted a previous dose. Dr. Eastes said he had met with some homœopathic globules which contained one grain of morphia instead of  $\frac{1}{1000}$ . Hahnemann believed in the dilution of drugs; his successors, in their concentration."

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A SAFE METHOD OF INDUCING PREMATURE LABOR.—Under this caption, Dr. B. R. Morris (*British Medical Journal*, Sept. 6, 1873) speaks of the great success he has had with electricity. A metallic sound, covered, except at the point, with a non-conducting substance, is inserted within the os uteri, while the other pole is placed upon the abdomen; they are then connected with the battery, and a slight continuous current passed through the uterus for ten minutes. This process is repeated several times, and is invariably followed by delivery in two or three days. Gaiffe's small pocket battery is the most convenient instrument for this purpose.

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### Bibliographical Notices.

*The Principles and Practice of Medical Jurisprudence.* By ALFRED SWAINE TAYLOR, M.D., F.R.S., Lecturer on Medical Jurisprudence in Guy's Hospital. Second Edition. Two volumes. Philadelphia: Henry C. Lea. 1873. Pp. 723 and 672.

IN preparing a second edition, the author found that so much new material had accumulated and so many new decisions had been rendered by the courts that it would be impossible to retain the old form of the work, and therefore the present edition has been published in two volumes. These contain nearly all the material found in the first edition, besides all the recent important cases which have occurred.

The section on Poisoning has been entirely revised, the results of all the new and improved processes of chemical analysis being given, and many new poisons being referred to. New methods for the detection of blood are added. The work includes the evidence given in the Tichborne case, and valuable additions have been made to the chapters on Asphyxia, Criminal Abortion, Infanticide, Insanity and Life Insurance.

As the work now appears, it embraces all the facts bearing on medical jurisprudence which the author was able to collect up to the very moment of going to press. Several new engravings have also been added.

*Report of Columbia Hospital for Women and Lying-in Asylum.* By J. HARRY THOMPSON. Washington: Government Printing Office. 1873. Pp. 430.

RECENTLY, the United States government published the first two volumes of the Medical and Surgical History of the Rebellion. The work was one of great value to the medical profession throughout the world, and the only regret which was expressed when these volumes appeared was that, owing to the great expense attending its publication, but a very limited number could be put into the market, and these only through the patronage of Congress.

If the money which has been foolishly spent in publishing the work whose title we have placed at the head of this review, could have been spent in printing additional numbers of the Medical Record of the Rebellion, everyone, with the possible exception of J. Harry Thompson, would have said that the money was well spent.

The work before us is nothing more or less than an advertisement of Columbia Hospital for Women and of its chief, J. Harry Thompson. As a medical work, it possesses little if any value. Much of it is an abstract from the writings of medical men distinguished as writers on obstetrics and diseases of women. These abstracts are, of course, valuable, but they receive no additional value from the surroundings in which they find themselves in this work. Very little original work of any value is to be found in the volume, and a review in detail of its contents seems, therefore, superfluous.

### BOOKS AND PAMPHLETS RECEIVED.

A Historical Account of Christ Church, Boston. An Address delivered on the One Hundred and Fiftieth Anniversary of the Opening of the Church, Dec. 29, 1873. By the Rev. Henry Burroughs. A. Williams & Co. 1874. Pp. 44.

The Origin and Propagation of Disease. By John C. Dalton, M.D. New York: D. Appleton & Co. 1874. Pp. 30.

Report of the Pennsylvania Hospital for the Insane for the year 1873. By Thomas S. Kirkbride, M.D. Philadelphia. 1874. Pp. 18.

Epidemic Diseases as dependent upon Meteorological Influences. By C. Spinzig, M.D. St. Louis, Mo. 1874. Pp. 58.

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**Boston Medical and Surgical Journal.**

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BOSTON: THURSDAY, MARCH 12, 1874.

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THE final death-blow was given to the various "Museums of Anatomy" at the meeting of the Board of Aldermen on Monday. As our readers will remember, the report of the Committee on Licenses, made at the meeting last week and recommending the closure of exhibitions of this character, was, to the surprise of every one, laid upon the table, and it was understood that the Board was about evenly divided on the question of refusing licenses. We are glad to see that some members of the Board have since listened to reason, and have been convinced that the remonstrants were merely contending against indecency and corruption of morals, that they were not actuated by any "professional jealousy," that "the redeeming features of these Museums can be seen for nothing elsewhere," and that, although promises of good behavior were freely given by the petitioners, the chances of their keeping the same were small and that the prospects of having such filthy exhibitions as we had last year were great.

The report of the Committee on Licenses, refusing Jourdain a license and directing the Chief of Police to close up his museum, was adopted by a vote of eleven yeas to one nay, Alderman Power voting alone in the negative. This vote covers, also, Hallock's case and all others of this class, and thus disposes of the question for the rest of the year. We doubt if any of this gentry will feel sufficiently encouraged to make a new attempt to open another show of this kind for some time to come.

There are those who may have thought, and the otherwise unaccountable silence of the daily press has implied, that more talk has been made about this matter than the importance of the subject demanded. We beg to call their attention to the fact that this has been nothing more or less than a contest between morality and immorality, in which, we are happy to say, the former has triumphed; and that an important and successful raid has, at the same time, been made upon a class of institutions which have been a disgrace to the city. We congratulate the remonstrants that their efforts in behalf of morality have been crowned with success, and the profession that such a marked step forward has been taken in the suppression of quackery.

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THE so-called Esmarch method for preventing hæmorrhage during operations may be looked upon as partaking of the nature of a revival and modification, we should hesitate to say improvement, of an old

and much employed device in surgery, rather than as the adoption of any new principle. A glance at text books on Surgery, or an inquiry into the traditions of hospital practice, or even into the more homely expedients in vogue with surgeons who do not enjoy the advantages of hospital experience, will convince one that the custom of depriving an extremity or any portion of it of its blood, either for the purpose of facilitating an operation or of preventing any unnecessary loss of blood in an anæmic and broken-down subject, is by no means a new one. The element of novelty, which has given to Esmarch's method its present popularity, is rather of a sensational than a useful character. This consists in the entire absence of blood, in the absolute dryness, in fact, with which operations are performed under this method. Examples of this kind are familiar to all in the minor operations of surgery, and are probably as old as surgery itself. An amputation of the thigh or a protracted operation upon a necrosed tibia without the appearance of even a single drop of blood has, on the other hand, a charm of novelty, not to say of luxury, about it which has led many to forget that all the advantages claimed for this method are to be obtained by a simple roller bandage and tourniquet, which have been used for this purpose for many years, both in this country and in Europe. We do not, indeed, obtain with the old method so perfect an immunity from hæmorrhage as we do with the new. The former is, however, both as regards the condition of the patient and the convenience of the operator, none the less effective, while some of the dangers of Esmarch's method, as paralysis, sloughing and risk of forcing poisonous substances into the circulation, are drawbacks which are likely to prove serious obstacles to its permanent adoption. It is worth while to remember all this when we see the method alluded to in medical journals as a "marked surgical improvement," and read in the daily newspapers of the new "triumph of modern surgical science."

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THE PATHOLOGY OF CHOLERA.—Dr. Hayem, of Paris, recently (Sept. 19th, 1873) imparted to the Société Médicale des Hôpitaux (*L'Union Médicale*, Oct. 4, 1873) the results of his investigations on the pathology of cholera. The blood of a patient in a state of algid collapse presented the following peculiarities:—The red globules were diffuent and viscid, variously altered in shape, and having a tendency to become agglutinated in irregular masses, instead of becoming piled up, as usual in healthy blood. Dr. Hayem does not, however, find in the blood any alteration which may be considered as specifically characteristic of cholera. The dejections of choleraic patients, at all periods of the disease, even in the stage of premonitory diarrhœa, were found to contain vast quantities of proto-organisms (bacteria, bacterida, and vibriones as classified by Davaine); as many as ten varieties of vibri-

ones were observed, and several kinds of sporules arranged in strings (probably bacterium termo and bacterium putredinis). Dr. Hayem doubts the existence of any special parasite belonging to cholera; he thinks that the choleraic dejections are chiefly characterized by an advanced state of putrescence from the very outset of the disease. The digestive tract invariably presented alterations of an inflammatory nature, extending from the œsophagus to the rectum, but most marked in the last portions of the ileum and in the ascending colon. The bowels were always found distended by liquid and gas, the fluid contents amounting in all cases to two or three quarts. This enormous subtraction of liquid, representing at least a third or a half of the entire mass of the liquor sanguinis, and uncompensated by absorption of drink, accounts for all the marked collapse and algidity observable in cases when vomiting and diarrhœa were not at all abundant. A microscopic examination of the diseased intestinal wall showed stasis, chiefly venous, in the mucous and submucous layers, and extensive, often complete desquamation of the epithelium, which was floating in the fluid contents of the bowel, its cells being infiltrated with fatty granules. The lymphoid tissue of the mucous membrane and villi was swollen, and infiltrated with granular lymph corpuscles. Dr. Hayem observes that these lesions, constituting general gastro-enteritis, offer no specific characters, as they differ in no way from those which attend intense catarrhal inflammations.

This short summary of Dr. Hayem's communication shows that his investigations are, so far, chiefly confirmatory of what was already known of the pathology of cholera. At the Société de Biologie, the subject of bacteria in connection with cholera was brought up on Oct. 4th (*Gazette Hebdomadaire*, Oct. 10, 1873). The discussion, in which Drs. Charcot, Ranvier, Hayem and Lionville took part, showed that, in the present state of our knowledge in relation to the natural history of bacteria, no satisfactory theory of the part played in pathology by these parasitic organisms could be established.

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**A DANGEROUS PESSARY.**—At a meeting of the Detroit Academy of Medicine, Dr. Jenks presented a pessary, removed by him from a woman a short time before. It had been placed in position by a physician about six weeks before the patient had consulted him. Upon examination, he found the uterus retroflexed, and the neck, which was exsanguinated, was protruding through the pessary. Upon removing it, he discovered that it had cut nearly half way through the neck, and he had no doubt, had it been left in place a few weeks longer, but that it would have entirely amputated the neck of the uterus.

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## The Hospitals.

### MASSACHUSETTS GENERAL HOSPITAL.

(Wednesday and Saturday, February 25 and 28, 1874.)

OPERATIONS were performed in the following cases:—Abscess, Malignant Onychia, Submaxillary Tumor, Needle in Wrist, Abscess, Traumatic Stricture of Urethra, Painful Cicatrix, Dorsal Dislocation of the right Hip, Caries of Femur.

*Abscess*—deeply situated under the pectoralis major of a man twenty-two years old. Opened by Dr. Cabot.

*Malignant Onychia*—of three months' duration, on the great toe of a woman. Evulsion of the nail and cauterization of the ulcerated surface with nitric acid by Dr. Cabot.

*Submaxillary Tumor*—of seven years' duration, in a woman twenty-six years old. Of the size of a walnut, slow growth, and not accompanied with pain. Excised by Dr. Cabot. It proved to be glandular.

*Needle in Wrist*—of a woman. Extracted by Dr. Cabot. Joint not opened.

*Abscess*—on the outer aspect of the thigh, in a male adult, with ankylosis of the joint from old hip-disease. Opened.

*Traumatic Stricture of the Urethra*—from a fall astride of a wagon wheel, three months ago; urethra admits a No. 5 (French scale) elastic bougie. Stricture ruptured with the large tube of Voilemier's instrument.

*Painful Cicatrix*—following an old amputation for two frost-bitten fingers, at the metacarpo-phalangeal articulation. Dr. Cabot removed the heads of the second and third metacarpal bones, and the whole of the cicatrix.

*Dorsal Dislocation of the right Hip*—of fourteen weeks' standing, in a man sixty-four years old, who had been crushed to the ground by the falling limb of a tree. Injury recognized immediately after the accident and treated by a "natural bone-setter." Present condition as follows:—Shortening of two and one half inches; slight flexion of the thigh; inversion, the toes crossing the instep of the other foot; head of the femur to be felt on the dorsum of the ilium; more mobility than would be expected in a dislocation. This, together with the moderate flexion of the thigh, was thought to indicate extensive rupture of the capsular ligament. Having been etherized and placed upon the floor, reduction by the "flexion method" was persistently, but unsuccessfully, attempted. The head of the femur could be readily moved, and the dislocation changed from dorsal to thyroid, but it was not possible to lift, or jerk the bone into its socket. In forcibly flexing, rotating and "circumducting" the limb, with a view to breaking up adhesions and enlarging the opening in the capsule, if this latter were the obstacle, the external branch, if not the whole of the Y-ligament, was ruptured. This was shown by the shortening which persisted and the position of the limb, which was now straight, while the foot could be inverted or everted at will; a condition of things constituting an "irregular dislocation" of Dr. Bigelow. The neck of the femur was not fractured, and the head of the bone could still be felt upon the dorsum and rotated as before. "Vertical traction" with pulleys, and with Dr. Bigelow's apparatus for "angular extension," was then practised, with efforts at local guidance of the head of the bone into the acetabulum, but equally without success. The shortening was reduced to one inch, and the head of the bone could be brought down to the edge of the acetabulum, but not be made to enter the cavity. After an hour of unavailing manœuvres, further measures were abandoned, and the patient was returned to the ward, where his legs were confined side by side, and extension, as in a fracture, applied to the foot by adhesive strips.

It was remarked that the obstacles to reduction were not apparent. That the capsule was not sufficiently ruptured to admit the head of the femur through the "button-hole," was hardly consistent with the circumduction practised and the mobility attained. There was no reason to think that the acetabulum was fractured, and the obliteration of this cavity was shown by cases to be of rare occurrence, even after the lapse of a longer period of time from the injury than had occurred in this instance. The operator expressed regret that the familiarity of Dr. Bigelow with the exceptional features of dislocated hip was not available in bringing to a more successful termination the protracted and varied manipulations which had been undertaken. On Monday, a repetition of the efforts at angular extension, with pulleys and local guidance, was made for half an hour, but with renewed unsuccessful.

*Caries*—of femur, in a male adult. The disease was located in the upper third of the femur, below the great trochanter and not connected with the joint. Dr. Cabot enlarged a sinus on the outer aspect of the thigh; also an

opening into the shaft with which it communicated. The diseased cancellous tissue, amounting in bulk to that of a walnut, was removed with gouge and cutting forceps.

H. H. A. BEACH.

### BOSTON CITY HOSPITAL.

THE following surgical operations were performed last Friday, March 6th:—

A Cystic Tumor was removed, by Dr. Cheever, from the neck of a patient 45 years old. The growth was of three months' duration, and was slowly increasing. It appeared as an irregular swelling, situated just behind and above the angle of the lower jaw; it was apparently attached deeply, and there was an obscure sense of fluctuation. The dissection of a V-shaped flap from above the tumor betrayed the character of the growth, as a cyst extending deeply in the tissues behind the ramus of the jaw.

A Dislocated Shoulder, complicated with a Fracture of the Neck of the Humerus on the same side, was treated by Dr. Thorndike. The injury was of five weeks' duration, and the crepitus of the fracture was still distinct. The dislocation was forwards. Sufficient union of the fragments had taken place to permit the breaking down of adhesions and the reduction of the shoulder by manipulation.

Dr. Wadsworth performed Canthoplasty on both eyes of an adult patient affected with chronic (trachomatous) conjunctivitis. The object of the operation was to relieve the constant constriction of the lid upon the globe, and, by lessening the tension of the conjunctiva, to promote its healing. The operation differed slightly in the two eyes. In one case, the skin and subcutaneous tissue at the outer canthus were divided with scissors down upon, but not through, the conjunctiva, the section being carried outwards two lines in length; in the other eye, the incision involved the conjunctiva with the skin. The tarsal ligament was snipped slightly at the upper margin of the wound, and the conjunctiva immediately adjacent to the incision was loosened with the closed blades of the scissors. Sutures were passed to unite the edges of the enlarged canthus to the underlying mucous membrane.

Dr. Wadsworth exhibited a patient on whom this operation had been done the week before. The success had been marked; the upper lid was set free, so that it no longer pressed tightly on the globe, and it could now be readily exposed for inspection and for the application of local remedies. The inflammation of the conjunctiva had already subsided considerably.

Other operations were as follows:—

Dr. Cheever incised a Fistula in Ano; Dr. Thorndike tapped a Hydrocele and injected it with tincture of iodine, and also performed Circumcision in a case of congenital phimosis; Dr. Wadsworth removed a Tumor from the lower lid.

On Monday, March 2d, Dr. Cheever Amputated the Arm of a patient who had suffered a compound and comminuted fracture of the forearm, in consequence of a fall from a freight train while it was in motion. The left forearm had multiple fractures; the hand was cold and without pulsation; the arm was torn up behind, four inches above the elbow. Dr. Cheever amputated by equal skin flaps, three inches below the shoulder.

On Tuesday, March 3d, Dr. Cheever operated in a case of Severe Injury of both Legs, from the premature explosion of a shot-gun. While the patient was crouching down, his fowling piece, loaded with No. 4 shot, was prematurely exploded by his dog. The muzzle was almost in contact with his right leg, just below the knee. The clothes were set on fire, and the skin was scorched by the nearness of the charge, when fired. After producing a deep lacerated wound of the anterior muscles of the right leg, the charge also struck the left leg, just above the ankle; here it produced a double compound fracture of both bones, with much laceration. No pulse was perceptible in either artery of the left foot; but there was good pulsation in both, in the right one.

Although the wound of the right leg was two inches below the knee, and no obvious communication existed, yet the knee-joint contained air, which gurgled loudly when the joint was moved; more careful examination revealed a longitudinal fracture of the shaft and head of the tibia, running up towards the knee-joint. Through the chink, air must have been forced into the joint by the explosion of the gun.

Being very unwilling to amputate one leg above the knee and the other below, Dr. Cheever decided to try to save the right limb. The wound was prolonged downwards and cleaned, and the leg was put upon a ham splint. Secondary hæmorrhage, or suppuration of the compound fracture into the knee, were the great dangers to be dreaded. The left leg was amputated, in the middle of the calf, with equal skin flaps.

F. W. DRAPER.

## Correspondence.

### LOCAL ANÆSTHESIA OF THE LARYNX.

BOSTON, Feb. 5, 1874.

MESSEURS. EDITORS,—I did not expect to be obliged to defend the practice of the Vienna professors when I wrote the article on "Local Anæsthesia of the Larynx" for your pages. My only object in writing it was to explain the method successfully used in Austria, and which I do not remember to have seen in the English literature, except in a short foot-note in Dr. Mackenzie's work; but the letter of Dr. Cohen is so discourteous and overbearing in its tone, and the statements so much at variance with my own experience and teaching, and what I believe to have been the experience of the majority of laryngoscopists, that it calls for a reply, though I should much prefer to leave the discussion to those of greater experience and who are more competent than myself in such matters.

What the "erroneous impression" is that the article is likely to "promulgate," the gentleman does not condescend to state. Is it that the method was not that described? Or that the results were not as stated? Or that the inference from the experience in the large number of cases quoted, where, in spite of the large amount of morphine used, "consciousness was never lost," that anæsthesia can be safely produced, is not warranted? It is not claimed that in all cases there is absolute freedom from risk; no one familiar with the effects of powerful drugs like morphine would infer that from the statement made. But it is claimed that the method is safe in the same way that chloroform is safe. The risk is very small, and, in cases of necessity, who would hesitate to use chloroform if he were unable to obtain ether?

The assertion that "it places the patient in unnecessary peril," is simply begging the question. Who is to decide whether the risk is necessary, Dr. Cohen on general principles, or the surgeon in a given case?

The next statement is, perhaps, the most remarkable in the letter. "It is a mistake to believe that the intra-laryngeal use of instruments requires, in the majority of cases, a tedious course of drillings; except in rare instances, such a course can only be required in the case of bunglers or beginners."

That bungler (or shall I say beginner?) Türck, writes:—

"There are certain individuals who, at the very first examination, bear very well a close contact of the entire glottis region, with sounds and other instruments, and where, without further preparation, an intra-laryngeal operation can be undertaken. This occurs, however, very seldom, and among the cases operated on by me up to the present time *only one single individual* of this description have I found. In order to blunt the sensibility of the larynx, an oft-repeated, very tedious drilling with sounds and other instruments, extending from a few days to some weeks, had to be undertaken."—*Klinik der Krankheiten des Kehlkopfes*, page 545.

It would take too much space to quote from all the writers who state this practice to be essential. Tobold, Bruns, Schroetter, Stoerk, in short, all authors, except Mackenzie and Cohen, recommend it. These gentlemen use

an instrument with which previous training is not so necessary, though it would never answer for one who had not an educated touch, for the point is seldom seen after passing the epiglottis. And a careful examination of Mackenzie's reported cases shows the necessity of previous drill in a large number of cases. The great value of the drill is, however, to allow the operation to be carefully and thoroughly carried out, and not done in a happy-go-lucky, hit-or-miss style.

To return once more to the subject of anæsthesia. It is not all that is to be desired, and each operator must determine for himself as to the expediency of its use; but I believe it will be still used in those cases which do occur where an operation, and a speedy one, is necessary, in an over-sensitive patient, in spite of the fulmination from Philadelphia.

F. A. HARRIS, M.D.

#### A CASE OF EXTENSIVELY RUPTURED PERINEUM.

MESSRS. EDITORS,—In your note in parenthesis, under the article of Pregnancy and Delivery without Rupture of the Hymen, in the JOURNAL of Jan. 29th ult. (page 125), you reflect on the wisdom of Prof. Cole's treatment in not at once dividing the hymen on its discovery. The writer had a more complete case of imperforate hymen, which was reported in the JOURNAL of Nov. 10, 1859, where, by delay, the cartilaginous hardness softened, and was easily broken through by the finger as the head descended, showing the wonderful powers of nature which accoucheurs often witness.

A case of an accident somewhat similar to the above, without any obstacle from the hymen, was reported by Dr. John Yale, of Ware, at the meeting of the Hampshire County Medical Society at Northampton. It was a case of labor attended with laceration of the recto-vaginal septum, the sphincter ani and part of the perineum, so as to permit the transit of a full-grown child, leaving the anterior portion of the perineum entire.

The wife of a mechanic, 19 years old, was taken in her first labor Jan. 10, 1866; the labor lasted twenty-four hours. Two hours before the termination, I was called. Pains once in three minutes. Head engaging in the superior strait; labor easy; presentation facial. The recto-vaginal septum gave way first, then followed the rent of the sphincter and perineum, like so much wet paper, and the child was born with great ease through this artificial opening, the mother exclaiming that "she got through much easier than she expected." Had I been absent from the bedside, I might have considered it an accident from want of care; but, being seated by the side of the patient, giving support to the perineum, in such a manner as to give a forward direction to the head, I was not able to prevent its occurrence; I only had time to think of chloroform to arrest the pains, before delivery was completed, such was its rapidity from the commencement of the rent above the sphincter.

One of my colleagues, Dr. D. W. Miner, was called, who verified my diagnosis and assisted in the treatment. The probable cause of the above termination was a faulty sacrum; being too perpendicular, the head of the child, instead of receiving its direction anteriorly in the direction of the axis of the lower outlet, was forced downwards upon the posterior portion of the perineum.

Four sutures of silk were passed to bring together the edges of the perineum. No sutures were applied to the sphincter, that the recto-vaginal septum might the better heal. The patient was put on her side, with her knees together. The urine was drawn by catheter twice in twenty-four hours, for five days, when she was able to pass it without assistance. The bowels were moved at the end of five days by castor oil and injections, and again in four days. After this time, there was no feeling of any discharge through the wound and the wind could be restrained.

After six weeks' quietness in bed, she got up well. I had hoped that she might conceive again, to test her capabilities; but now that she has become a widow, her prospects in that direction are gloomy. \*\*\*

## EAU DE COLOGNE.

BOSTON, Feb. 14, 1874.

MESSRS EDITORS,—The other day, while looking through the medical pamphlets preserved in our City Library, I came across an advertising circular entitled "*Vertus et Effets de l'excellente Eau admirable, ou Eau de Cologne*, approuvée par la Faculté de Médecine, le 13 Janvier, 1727"; from this I learned—what was quite novel to me—that eau de Cologne was originally concocted for a quack medicine. In the circular, which in type, paper and language bears evidence of belonging to the last century, it is stated that this water was invented by an Italian, Sig. Paul Feminis, an old distiller of Cologne.

It is described as a "volatile spirit, extracted from the rarest and most delicate simples; an elixir which has the power of restoring the parts of the body that are attacked by any disease, or predisposition to the same, of fortifying and reëstablishing their natural functions, of insinuating into them a moderate and living warmth, which, sympathizing with their own, reanimates their vital forces, aids the coctions, and forcibly expels all the excrements."

It seems to have been employed internally and externally, and to have been a sovereign remedy for apoplexy, paralysis, palpitation, obstructions of the liver, spleen and kidneys, migraine, sore eyes, ringing in the ears, toothache, gout, gravel, burns, bruises, &c. &c., to have greatly aided the course of labor, and to have been a specific in diseases of the womb.

The sheet ends with the usual

"Caution."

"It is undisputed that the Sr. Paul Feminis, inventor and author of the Eau admirable de Cologne, before dying, left his secret and the composition solely to Jean Antoine Farina, who notifies and cautions the public that Eau de Cologne, which is made and sold under any other name whatsoever, is neither of the quality nor composition of that invented by the originator. The present owner, therefore, as the sole successor and inheritor of the said secret, making the only veritable Eau de Cologne, gives notice besides that every other brand is wanting in the good effects pertaining to that of the above said author, whose successor is Jean Antoine Farina, distiller at the sign of the City of Milan, Golden Scales St., Cologne."

The qualities for which the water is now so celebrated were evidently too insignificant to be classed among its multitudinous virtues. If possible, it would be interesting to puruse the advertising circulars of the successive years down to the present day, so as to follow the gradual withdrawal of its claims to be a therapeutic agent. Popular pathology seems to have changed but little from that here recorded.

Yours very truly,

JAMES R. CHADWICK, M.D.

## A CASE OF DOUBLE NIPPLE.

BOSTON, March 1, 1874.

MESSRS. EDITORS,—The following case of double nipple may be, perhaps, of some interest to the readers of the JOURNAL.

M. T., adult American woman, married about five years ago; one miscarriage, two births (boys) followed. The younger of the children is now at the breast.

When quite a young girl, the woman noticed the two marks or "moles," about two inches below the nipples; as she grew older and the breasts were developed, the "moles" were shaped after the pattern of the usual nipple, only smaller. During pregnancy, the darkened areola was seen plainly on all four nipples, and, after delivery, milk flowed freely from all equally. Not wishing to favor the flow from the lower pair, she never allowed the child to nurse from them, and, after a few weeks, no great leakage was remarked, except on pressure.

The older boy has the same marks, quite plainly seen on the right side, less on the left.

JOHN DIXWELL, M.D.

## Medical Miscellany.

**APPOINTMENT.**—H. J. Barnes, M.D., and W. C. Holyoke, M.D., have been appointed Assistant Surgeons at the Boston City Hospital for the ensuing year.

**VALESCUS**, of Taranta, says (*Bonetus*, p. 288) "that he who presumes to cure a hernia in a cacochymick, a weak or an old man by incision, does plainly desire to be accounted a murderer."

**CONTAGIOUSNESS OF THE PLAGUE.**—"One at the table told an odd passage in this last plague; that at Petersfield, I think he said, one side of the street had every house almost infected through the town, and the other, not one shut up."—*Pepys's Diary*, 1667.

**CONGENITAL ABSENCE OF BOTH EYES.**—A case of congenital absence of both eyes appeared recently at the clinic of Mr. Liebreich, the patient being an infant about two months old. The orbits were mere fissures; the lids were normal; the orbital fissure was covered with conjunctiva, and there was a normal lachrymal secretion, as was evident when the child cried.—*London Correspondent of Detroit Review of Medicine*.

**THE PROPER TREATMENT OF CHILDREN.**—The *Medical Times and Gazette* says of the annual discourse before the Massachusetts Medical Society:—

"The conclusions at which Dr. Buckingham has arrived are consistent with common sense and experience. The facts in the Address may be fairly endorsed by practitioners in this country."

**CAUTION TO DRUGGISTS.**—A mixture of chromic acid and glycerine is a formula which has recently been highly recommended in certain affections of the mouth, scrofula, &c. Dr. Mascarel takes occasion to warn druggists that when these two substances are vigorously rubbed up together, the result is a lively explosion, an accident which can be averted by adding the glycerine drop by drop, and grinding slowly.—*Il Raccoglitore Medico*, No. xxxi. 1873.

**USE OF GLAZIER'S PUTTY IN SURGERY.**—Ordinary mixed putty has been found by Mr. Courvall to be the softest and most applicable means of treating excrescences or tumors of various kinds where compression is desired, as it moulds itself so neatly to the skin. He believes it to be superior to dextrine, silicate of soda, or plaster bandages. It is a cheap and always attainable material.—*The Medical Press and Circular*.

**CHLORAL IN CHOLERA MORBUS.**—Dr. Louis B. Bouchelle (Georgia) has employed chloral in cholera morbus for the past two years with marked success. He states that, in the case of adults, a single dose of twenty to thirty grains has in every instance served to quiet the stomach and bowels, and the patient drops into a refreshing slumber, from which he wakes, in a few hours, relieved.—*The Southern Medical Record*, January, 1874.

**SUCCESSFUL COLOTOMY IN THE INFANT.**—At a recent meeting of the Manchester Medical Society, Mr. Bradley related the case of an infant, then three months old, on whom he had performed colotomy two days after birth. From the close approximation of the ischiatic tuberosities, and the entire absence of the perineal bulging, he had opened the colon in the left lumbar region, without making an incision in search of the rectum. This, he argued, was the best course in such cases, as the almost invariable fatality of colotomy in the infant he believed to be largely due to the loss of blood which generally attended the exploratory incisions, which were, moreover, very often unsuccessful. During the operation, the kidney was wounded; but from this no evil effects appeared to have flowed.—*British Medical Journal*, January 24, 1874.

**OSSIFICATION OF THE PLACENTA.**—A young woman, aged 18, was seized with active symptoms of labor at the end of the seventh month of gestation. The pains, which at first were moderate, were followed, at the expiration of twenty-four hours, by severe rigors, which were only relieved by the administration of opium and chloroform. These pains and rigors recurred at various intervals for forty-six days, when true labor commenced, and terminated in the birth of a child of moderate size. Upon detaching the placenta, it was noticed that there was an unusual feeling, and, upon examination, the whole attaching surface was found to be covered with a net-work of bone, containing solid plates as large as a dime, and a line in thickness.—*The Southern Medical Record*, January, 1874.

**TREATMENT OF THREADWORM.**—In a recent lecture by Dr. J. Spencer Cobbold, it was stated that the difficulty experienced by physicians in relieving patients from oxyuris vermicularis arose from the old and mistaken notion that the parasite resides in the rectum and sigmoid flexure, whereas recent investigations have shown that the entire length of the colon is the territory inhabited by the threadworm, while the cæcum constitutes the parasite's true headquarters. For this reason, active saline cathartics should be given to wash out the contents of the colon and cæcum, injections being afterwards given to dislodge such oxyurides as have been driven down to the lower bowel.

**PUBLIC SCHOOLS—PRECAUTIONS AGAINST INFECTIOUS DISEASES.**—Dr. Whitmore, the medical officer of Marylebone, has, in consequence of the prevailing and fatal epidemic of measles, sent a circular not only to the managers of every school in his district, but to every member of the London School Board, in which he states that measles is to a considerable extent disseminated by the free intercourse which takes place amongst children of the poorer classes in parochial and other public schools. He suggests that all school managers should take the trouble to ascertain whether children attending schools come from houses where measles, &c., exist, and prohibit further attendance until such houses are free from infection; also, that any room or cupboard used for children's hats, caps, bonnets, cloaks, &c., should be constantly disinfected by the free use of chloride of lime or carbolic acid.—*London Medical Record*.

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#### NOTES AND QUERIES.

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**PREPARATION OF CROTON CHLORAL HYDRATE.**—Croton oil is cut in absolute alcohol and is then treated with chloroform, the same as the common chloral hydrate.  
*Boston, February 27, 1874.*

LEOPOLD BABO.

The publishers acknowledge the receipt of subscription from Dr. O'G., of Dublin.

**MORTALITY IN MASSACHUSETTS.**—Deaths in seventeen Cities and Towns for the week ending February 28, 1874.

Boston, 132; Worcester, 13; Lowell, 21; Milford, 6; Chelsea, 3; Cambridge, 14; Salem, 13; Lawrence, 14; Springfield, 5; Lynn, 11; Fitchburg, 1; Taunton, 4; Newburyport, 6; Somerville, 10; Fall River, 17; Haverhill, 2; Holyoke, 6. Total, 277.

*Prevalent Diseases.*—Consumption, 44; pneumonia, 36; scarlet fever, 15.

GEORGE DERBY, M.D.,  
Secretary of the State Board of Health.

**DEATHS IN BOSTON** for the week ending Saturday, March 7th, 119. Males, 58; females, 61. Accident, 1; abscess, 1; apoplexy, 3; bronchitis, 2; disease of the brain, 2; cancer, 4; cyanosis, 1; cholera infantum, 1; consumption, 29; convulsions, 4; debility, 4; diarrhoea, 1; dropsy, 1; dropsy of the brain, 1; diphtheria, 1; scarlet fever, 8; disease of the hip, 1; disease of the heart, 6; hæmorrhage, 1; homicide, 1; intemperance, 1; disease of the kidneys, 1; congestion of the lungs, 2; inflammation of the lungs, 13; malformation of the bowels, 1; marasmus, 4; old age, 3; paralysis, 1; pleurisy, 3; premature birth, 1; peritonitis, 2; puerperal disease, 2; scalded, 1; syphilis, 2; suicide, 1; teething, 1; whooping cough, 3; unknown, 4.

Under 5 years of age, 49; between 5 and 20 years, 5; between 20 and 40 years, 30; between 40 and 60 years, 18; over 60 years, 17. Born in the United States, 85; Ireland 22; other places, 12.